UCSF CIRM Building

Grant Award Details

UCSF CIRM Building

Grant Type: Major Facilities

Grant Number: FA1-00618

Investigator:

Name:	A. Washington
Institution:	University of California, San Francisco
Type:	PI

Award Value: $34,862,400

Status: Closed

Grant Application Details

Application Title: UCSF CIRM Building

Public Abstract:

Stem cell research at UCSF began over a quarter century ago and has produced important breakthroughs in our understanding of how tissues and organs develop. Recent advances have opened the potential for revolutionary progress in understanding, treating, and curing devastating human diseases. To accelerate the pace of research, we created a formal stem cell research program—an Institute for Regeneration Medicine (IRM). The proposed IRM building will be the hub of the innovative program and will provide laboratories and technological resources to allow growth and integration of the program.

To succeed, we must find ways to foster research in many different areas simultaneously, while sustaining a clear focus on our goals. We achieve this by organizing research along seven "pipelines," each integrating a scope of research from basic science to clinical trials and each directed toward an area of clinical importance where we excel: cardiovascular, neural, pancreas and liver, hematopoiesis, musculoskeletal, epithelial and reproduction biology. These pipelines in turn interact with five research programs—human embryonic stem cells, cancer, immunology, genetics, and bioengineering—and are served by an array of advanced technology facilities. The result is a powerful, broad-based, interactive team of 123 principal investigators (PIs) dedicated to the missions of the pipelines. The IRM building will house 25 key stem cell investigators and their labs, including representation from each pipeline. All stem cell program PIs will have full access to human embryonic stem cell lines, including newly created ones.

The IRM building is stunning and innovative, featuring split-level connections that encourage collaboration, and open, flexible-use floor plans that support non-federally funded research, intermix basic and clinical researchers, and incorporate space for visiting scientists. Core technology facilities are clustered to encourage interactions among users.

The organization of the research program and the design of the building address two related realities. First, success in stem cell research demands a broad range of approaches coupled with a dedicated focus on missions—the development of therapies requires teams of scientists across the research spectrum from basic to preclinical research to clinical trials. Second, stem cell research may provide cures for grave illnesses and injuries for which no treatments currently exist, underscoring the urgency in bringing discoveries to the bedside. Maintaining a rapid research pace demands that scientists and physicians build on each other's discoveries, whether they occur across the hall or across the world. Our research program and building respond to these challenges. Our plans are ambitious because they must be. They are backed by an enduring institutional commitment to accelerate the pace of stem cell research and to realize its potential to transform the practice of medicine.

Statement of Benefit to California:

When California's citizens voted in favor of Proposition 71, they sent a clear message that they want scientists in our state to play a role in stem cell research that may revolutionize medical treatment and produce significant economic benefits. Toward realizing those goals, we propose to create a dedicated stem cell research facility that is designed to foster the collaborative cross-cutting culture essential for stem cell research, serve as the hub of our growing stem cell program, and accelerate progress toward new cell-based therapies for the treatment of a wide range of disorders. Diabetes mellitus affects over 1.5 million people in California. Over 500,000 Californians have chronic liver disease. Over 100,000 Californians have heart attacks each year, and nearly 250,000 suffer epilepsy. Over 100,000 new cases of cancer are diagnosed in California each year. Over 100,000 Californians have Parkinson's disease, and every year 250,000 suffer brain or spinal cord injuries causing permanent functional disability. These are just some of the disorders that stem cell scientists at our institution are working to treat or cure. The costs of caring for those affected by diseases and the strain on families and care-givers are substantial. Conventional therapies have not provided desperately needed cures. Our stem cell program combines the talents of 123 faculty researchers ranging from developmental biologists, neurobiologists, and cardiologists to bioengineers, immunologists, surgeons, and cancer researchers. Their efforts are organized around seven research areas that we have designated "pipelines" and are directed toward developing cell-based therapies.

The creation of a dedicated stem cell research facility at our institution will provide space and resources needed to investigate the enormous potential of stem cells and develop new cell-based treatments for our patients. The facility will be home to the human embryonic stem cell program—an incubator for discovery providing non-federal space where ethically sound research can advance unimpeded with the best-quality human stem cell lines. The new laboratories will draw world-class researchers to our city and California, and their neighborhoods will be a testing ground for new technologies. Discoveries will generate valuable intellectual property to be shared with California. Experience suggests that new stem cell technologies will attract biotechnology interest and promote local business growth and development. Early clinical success should attract industry investment to help convert promising discoveries into safe, effective therapeutic products. The proposed new facility will be a catalyst accelerating progress in stem cell research spanning from basic discovery to clinical application and ultimately to the treatment or cure of currently devastating illnesses for the benefit of the people of California.
